

WHAT IS CLAIMED IS:

1. A composition based on zirconium oxide and cerium oxide, characterized in that it comprises tin oxide in
5 a proportion of at most 25% by weight of oxide.
2. The composition as claimed in claim 1, characterized in that it comprises tin oxide in a proportion of at most 20%, more particularly of at most
10 10%, by weight of oxide.
3. The composition as claimed in claim 1 or 2, characterized in that it comprises tin oxide in a proportion of at most 5% by weight of oxide.
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4. The composition as claimed in one of the preceding claims, characterized in that the Ce/Zr molar ratio is between 0.10 and 4, more particularly between 0.15 and 2.25.
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5. The composition as claimed in one of the preceding claims, characterized in that it additionally comprises at least one oxide of a rare earth metal other than cerium.
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6. The composition as claimed in claim 5, characterized in that the proportion of the oxide of the abovementioned rare earth metal is at most 35%, more particularly at most 10%.
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7. The composition as claimed in claim 5 or 6, characterized in that the abovementioned rare earth metal is chosen from yttrium, lanthanum, neodymium and praseodymium.
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8. The composition as claimed in one of the preceding claims, characterized in that it exhibits at least one reducibility peak at a temperature of less than 500°C.

9. The composition as claimed in one of claims 1 to 4, characterized in that it exhibits an OSC of at least 0.3 ml of O₂/g/s at 400°C.

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10. The composition as claimed in one of claims 5 to 8, characterized in that it exhibits an OSC of at least 0.35 ml of O₂/g/s, more particularly of at least 1 ml of O₂/g/s, at 400°C.

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11. The composition as claimed in one of claims 1 to 4 and 9, characterized in that it exhibits a Ce/Zr ratio of at least 0.5 and an OSC of at least 0.1 ml of O₂/g/s at 300°C.

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12. The composition as claimed in one of claims 5 to 8 and 10, characterized in that the rare earth metal other than cerium is not yttrium and in that it exhibits an OSC of at least 0.2 ml of O₂/g/s, more particularly of at least 0.4 ml of O₂/g/s, at 300°C.

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13. The composition as claimed in one of claims 1 to 4 and 9, characterized in that it exhibits either a Ce/Zr ratio of at least 1 and a specific surface, after calcination at 1000°C for 10 hours, of at least 5 m²/g or a Ce/Zr ratio of less than 1 and a specific surface, after calcination at 1000°C for 10 hours, of at least 8 m²/g.

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14. The composition as claimed in one of claims 5 to 8 and 10, characterized in that it exhibits either a Ce/Zr ratio of at least 1 and a specific surface, after calcination at 1000°C for 10 hours, of at least 5 m²/g or a Ce/Zr ratio of less than 1 and a specific surface, after calcination at 1000°C for 10 hours, of at least 15 m²/g.

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15. A process for the preparation of a composition as claimed in one of the preceding claims, characterized

in that it comprises the following stages:

- (a) a mixture comprising compounds of zirconium, of cerium, of tin and, if appropriate, of the abovementioned rare earth metal is formed;
- 5 - (b) said mixture is brought into contact with a basic compound, whereby a precipitate is obtained;
- (c) said precipitate is heated in an aqueous medium;
- (d) the precipitate thus obtained is calcined.

10 16. The process as claimed in claim 15, characterized in that it comprises an additional stage, intermediate between the abovementioned stage (c) and the above-mentioned calcination stage (d), in which an additive which is chosen from anionic surfactants, nonionic
15 surfactants, polyethylene glycols and carboxylic acids and their salts and surfactants of the carboxymethylated ethoxylates of fatty alcohols type is added to the precipitate resulting from stage (c).

20 17. The process as claimed in claim 15 or 16, characterized in that use is made, as compounds of zirconium, cerium, tin and the abovementioned rare earth metal, of a compound chosen from nitrates, acetates, oxalates, chlorides or ceric ammonium
25 nitrates.

18. The process as claimed in one of claims 15 to 17, characterized in that use is made, in the mixture of stage (a), of a cerium compound in which the latter is
30 in the form of Ce(III) and/or of a tin(II) compound and an oxidizing agent is added during stage (a) or during stage (b), in particular at the end of the latter.

19. The process as claimed in one of claims 15 to 18,
35 characterized in that the heating of the precipitate of stage (c) is carried out at a temperature of at least 100°C.

20. A catalytic system, characterized in that it

comprises a composition as claimed in one of claims 1 to 14.

21. A process for the treatment of exhaust gases from internal combustion engines, characterized in that use is made, as catalyst, of a catalytic system as claimed in claim 20 or of a composition as claimed in one of claims 1 to 14.

22. A process for the purification of air, this air comprising at least one compound of the carbon monoxide, ethylene, aldehyde, amine, mercaptan, ozone and volatile organic compounds or atmospheric pollutants, such as fatty acids, hydrocarbons, in particular aromatic hydrocarbons, nitrogen oxides (for the oxidation of NO to give NO₂) and malodorous compounds type, characterized in that the air is brought into contact with a catalytic system as claimed in claim 20 or a composition as claimed in one of claims 1 to 14.